

NON-TECHNICAL SUMMARY OF
ELECTRICAL TERMINOLOGY

622985

NOTES

ELECTRICITY

Current - flow of electricity; alternating, direct

AC Direction reverses at regular intervals;
frequency is usually 60 cycles per second.

DC Current flows continuously in same direction;
in some home plants and sometimes in downtown
or industrial areas. Most home plants are 32 v.

Equipment - either a-c or d-c; or both ac-dc.

Universal motors, incandescent lighting and heating
equipment, unless it has automatic control, can be
used on a-c or d-c if voltage is same in both cases.

Do not use other d-c equipment on a-c circuits, or
a-c equipment on d-c circuits.

Conductors - copper, aluminum, other metals

Insulators - glass, porcelain, rubber, plastics

Grounds - earth, driven rods, piping systems

COMMON TERMS OF ELECTRICAL MEASUREMENT

Term: Definition - unit of measurement of:

Volt Pressure - difference in potential

Ampere Rate of flow - current

Ohm Resistance to flow

Watt Power - rate of doing work

Kilowatt 1000 watts

Watt-hour 1 watt used for 1 hour (watts x time)

Kilowatt-hour 1000 watts used for 1 hour

(1 kw. x 1 hr. or 100 w. x 10 hrs.)

Horsepower 746 watts (1 hp. = 1 kw. apparent power)

COST FORMULA FOR ELECTRICITY

$\frac{\text{watts} \times \text{hours}}{1000}$ gives kwh

Kwh x $\frac{\text{\$}}{\text{kwh}}$ per kwh gives cost

USEFUL FORMULAS (Strictly speaking, these apply to
heating equipment and incandescent lighting only.)

amperes x volts = watts $\frac{\text{watts}}{\text{volts}} = \text{amperes}$

INFORMATION ON NAME PLATE

Manufacturer's name, address

Model number

Voltage

Wattage or amperage

Kind of current (a-c, d-c, or both ac-dc)

Frequency (usually 60 cycles)

RELATED ELECTRICAL TERMS

Generation plant Transmission lines

Substations Distribution lines

Types of distribution ("high," primary) lines

Single-phase (2-wire)

Three-phase (4-wire or 3-wire)

Transformer ($1\frac{1}{2}$, 3, 5, $7\frac{1}{2}$, 10 kva)
 Secondary lines (2- or 3-wire; 115 or 115/230 v.)
 Yard pole or power pole
 Service wires
 Service drops
 Kwh meter (watt-hour meter), dial or cyclometer type
 Entrance switch (main disconnect)
 Service entrances:
 2-wire 115 v. (110 to 120 v.)
 3-wire 115 v. and 230 v. (120/240 v.)
 Service equipment (load or control center)
 Circuit breaker or fuse box, sometimes main
 and branch panels with feeders or risers
 Protective devices - breakers or fuses
 Ground - electrical connection to earth
 Circuits
 Open ("dead," "cold"); closed ("live," "hot")
 Short circuit
 Types of interior-wiring circuits:
 General purpose (15 amp. branch circuit)
 Appliance (20 amp. branch circuit)
 Individual appliance or special purpose
 Convenience outlets (double or duplex, triple)
 Power or heavy-duty outlets
 Lighting outlets and switches
 Fixtures, portable lamps & equipment or appliances

ABBREVIATIONS USED IN ELECTRICAL LITERATURE

A. Angstrom (unit for measuring wave length)
 amp. ampere (also a. or A)
 a-c alternating current (also AC, A.C., a.c.)
 AM amplitude modulation - radio
 AWG American Wire Gauge (also Awg.)
 Btu British thermal unit (also B.t.u.)
 cal. calorie
 d-c direct current (also DC, D.C., d.c.)
 E-viton Erythral viton - sun lamp rating
 f.c. foot-candle (also FC, ft-c, ft.-c.)
 f.l. foot-lambert (also FL, ft-L, ft.-l.)
 FM frequency modulation - radio
 hp. horsepower (also HP, H.P., h.p.)
 K. Kelvin (degrees temperature; fluorescent
 kc kilocycle (also kc.)
 kva kilovolt-ampere (also kv.-a., kv-a)
 kw. kilowatt (also kw, KW)
 kwh kilowatt-hour (also K.W.H., kw.-hr., kw-h)
 rpm revolutions per minute (also r.p.m.)
 T-rated tungsten-rated - switches
 v. volt (also V, v)
 w. watt (also W, w)

AHLI American Home Lighting Institute
 ASA American Standards Association
 CLM Certified Lamp Makers
 ETL Electrical Testing Laboratories
 NEC National Electrical Code
 NEMA National Electrical Manufacturers Association
 NESC National Electrical Safety Code
 UL Underwriters' Laboratories